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# Pack 103, Item 5

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# Our matoke will survive: Ugandan farmers fight banana bacterial wilt

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### Notes to broadcaster

This script captures the experiences of matoke farmers in the Bushenyi district of western Uganda in their fight against banana bacterial wilt. Bushenyi is one of the biggest matoke-producing areas in the country, and one of the worst affected by this banana disaster.

The script revisits the shock of farmers when they first saw the disease, and their frustration with not knowing how to stop it. It shows the widespread devastation, as entire banana fields were wiped out by the disease, and the frantic experiments some farmers developed in a vain attempt to keep a few banana stems standing until, finally, real workable solutions were found.

You could use this script as inspiration to research and write a script on the best ways to fight banana bacterial wilt in banana-growing areas, and how farmers can improve banana yields by following simple agronomic practices.

Or you might choose to produce this script on your station, using voice actors to represent the speakers. If so, please make sure to tell your audience at the beginning of the program that the voices are those of actors, not the original people involved in the interviews.

Talk to farmers and other experts who grow bananas or are knowledgeable about the crop. You might ask them:

What’s the main difference between those farmers who have managed to contain banana bacterial wilt and those who have failed?

What advice would you give to a farmer with a poor banana yield? What kinds of problems should the farmer look for?

For a farmer who is planning to plant his first banana crop, what does he or she need to know to have a wilt-free plantation? What can the farmer do to get the best yields?

Estimated running time for the script: 20 minutes, with intro and outro music.

**HOST:** Greetings, listeners, and welcome to the program. My name is \_\_\_\_. Today we will be talking about growing matoke (*Editor’s note:* matoke *is cooking banana*). And, of course in this day and age, you can’t talk about growing bananas without talking about banana bacterial wilt. This disease first appeared in Ugandan banana fields about fifteen years ago, and slowly started destroying people’s livelihoods and their major source of food—one plant at a time!

Matoke is one of the best-loved staple foods in Uganda, and has for a long time been one of the biggest income-generating food crops. So when the disease started destroying banana plants, many farmers lost their source of income in a matter of months.

Farmers were left in fear of the future. What would happen to their families without their biggest source of food and money? Was there a way of stopping this epidemic?

Individual farmers started experimenting with solutions. The most common one was to cut down any plants that showed signs of sickness.

This didn't work at all, which rather came as a surprise to farmers. The government was getting more and more worried too, so scientists went to work. Non-governmental organizations started looking for solutions too. Soon the National Agricultural Advisory Services, also called NAADS, and some NGOs started educating farmers on how to fight banana wilt. But by then, many farmers had lost their entire banana crop. The disease seemed to have won; the farmers had given up.

But not all farmers gave up the fight. One by one, brave farmers started implementing the advice from NAADS and the NGOs. One by one, fields started regaining their health. One by one, farmers started recovering hope.

Now banana bacterial wilt seems to be losing the battle and banana fields are starting to flourish again. But there is still a lot to be done.

I visited a few farmers in Bushenyi district to learn about fighting this deadly disease and how they have overcome it. First, we will hear from Madam Moreen Mwesigwa from Rwemitoozo village in Kyeizooba subcounty. She’s considered one of the most successful banana farmers in her village.

Signature tune up and out

**HOST:** (AWAY FROM MIC, PROJECTING VOICE)Hello, could this be Moreen Mwesigwa’s home, or am I lost?

**MOREEN** **Mwesigwa:** (CLOSE TO MIC) You are in the right place. Who might you be?

**HOST:** I am from the radio station. I am here to have an interview with you about banana wilt.

**MOREEN** **Mwesigwa:** Oh yes, you called earlier. You are very welcome, sir. Please take a seat.

**HOST:** Thank you so much. Your bananas look very good. It looks as if you never saw banana wilt.

**MOREEN** **Mwesigwa:** (LAUGHS) You should have come here four or five years ago!

**HOST:** Were your bananas in bad shape?

**MOREEN** **Mwesigwa:** It was terrible! Really horrendous!

**HOST:** When did you first see this disease?

**MOREEN** **Mwesigwa:** In 2002, we heard on the radio that there was a banana disease that was destroying people’s bananas in faraway villages. There was widespread fear of hunger and starvation. At the time, I thought people were just overreacting. We didn't know the real seriousness of the problem because we didn't have the disease in this area.

**HOST:** When did you realize the seriousness of the problem?

**MOREEN** **Mwesigwa:** In 2003, NAADS started sensitizing the whole district about this new disease. As part of the sensitization, they took farmers from this village to villages already affected so that we could take the necessary precautions to stave it off. When I saw how badly the bananas were affected in the villages we visited, I was horrified. Some farmers had already lost everything. Other farmers still had a few plants, but they looked as if they had been hit by the worst hailstones—dried leaves, tiny banana stems, and young bunches of matoke ripening prematurely or rotting.

**HOST:** That must have been scary.

**MOREEN** **Mwesigwa:** You have no idea! When I came home, I walked through my field every morning to see if there were any sick plants.

**HOST:** And did you see any diseased plants?

**MOREEN** **Mwesigwa:** For about four years, I didn't see any. I was beginning to think I was lucky. And then one day in 2007, I hosted a party here and that’s how the disease came to my garden.

**HOST:** I don’t understand.

**MOREEN** **Mwesigwa:** It’s customary that when you host a party here in Ankole, your friends, neighbours, and family help you with all sorts of foods. One of the main foods we got for the party was matoke, and after peeling them, I was left with a very big heap of peelings. I was very happy because I knew the peelings would fertilize a sizable part of my banana fields. But then someone warned me against it; they said it could spread the disease to my bananas. I took his advice but it was no use! A few months after the party, I saw diseased plants all around the spot where we had peeled.

**HOST:** How did that happen?

**MOREEN** **Mwesigwa:** I think some of the bananas we brought to the party were diseased! The mistake I made was allowing the harvest of banana leaves for covering matoke with those contaminated knives.

**HOST:** What did you do when you saw the diseased plants?

**MOREEN** **Mwesigwa:** I cut them down and buried them. A few months later, I saw another sick plant. It got worse and worse until I was cutting four plants every day.

By this time I was no longer able to sell a single bunch of matoke.

**HOST:** How many were you selling before?

**MOREEN** **Mwesigwa:** There were times I would sell 70 bunches of matoke a month, big ones that one person couldn't lift.

**HOST:** How long did it take from the time you saw the first diseased plant to when your bananas were ruined?

**MOREEN** **Mwesigwa:** Two years.

**HOST:** But now it’s looking great! My question is, how have you managed to fight it successfully now when you failed to fight it then?

**MOREEN** **Mwesigwa:** I was doing it all wrong.

**HOST:** How?

**MOREEN** **Mwesigwa:** For instance, I was not aware that I needed to sanitize the panga I used to cut down a sick plant before using it on a healthy one (*Editor’s note: a* panga *is a machete*). Or thatusing one panga in more than one banana field was wrong. This helps spread the disease to all of them.

**HOST:** So what’s the right thing to do?

**MOREEN** **Mwesigwa:** After cutting diseased plants, you must put the panga in fire for some minutes, or wipe it using a solution of Jik. This helps kill the bacteria on the panga. If you have more than one banana field, each field should have its own marked panga. That way, when a field gets diseased, you can contain the disease in that one field and save the others. Also, while carrying out routine de-suckering and de-leafing, farmers should sanitize tools before moving from one plant to another.

**HOST:** That means one would have to move through the field with a bucket of Jik to dip the tools while de-leafing and de-suckering.

**MOREEN:** Yes.

**HOST:** So apart from managing banana wilt, what else are you doing to have great yields? I can see some good money hanging on those trees …

**MOREEN** **Mwesigwa:** (LAUGHS) Thank you. Well, the yields are good now because at some point I had to cut entire stools and plant afresh. Last year, the field was beginning to get healthy. So I got my hoe and tilled the soil to make it softer. Then I applied manure and mulched.

**HOST:** What did you use as mulch?

**MOREEN** **Mwesigwa:** I used dried grass from the swamp. We have learned about irrigation too, to keep the yields high during droughts.

**HOST:** I left Moreen’s home for another village not far away called Kitagata.

 I met Robina Rwaheiguru, a woman in her early forties. She is the secretary of the 21-member farmers’ group called Kitara, which means “granary.”

**SFX:**  MOTORCAR ENGINE STOPS OFF-MIC

**ROBINA Rwaheiguru:** (HAPPY, PROJECTING VOICE) You are most welcome, sir. I have just arrived home from the farm to wait for you. You are from the radio, right?

**HOST:** Yes, I am. Thank you, Madam Robina. Can we please talk as we walk through your banana fields, if you don't mind?

**R. Rwaheiguru:** I don’t mind at all. Come; let’s start in the field across the road.

**HOST:** Of course. So I am here to ask a few questions about banana wilt. When did you first see this disease in your bananas?

**R. Rwaheiguru:** It was 2005. I went to visit a sister-in-law of mine in Bunyaruguru who was unwell. And I couldn't help but notice that her bananas and those of her neighbours were terribly affected by a strange disease. It was only a month after I returned when I saw the first sick plant in my banana field. It’s as if I had come home with the disease in my shoes.

**HOST:** What did you do then?

**R. Rwaheiguru:** By this time, the subcounty was already sensitizing people about the disease. They were telling us to cut the diseased plants and bury them as soon as possible. And that’s what I did.

**HOST:** Did this help?

**R. Rwaheiguru:** No. The disease increased until my whole crop was gone.

**HOST:** How long did that take?

**R. Rwaheiguru:** It took about two years.

**HOST:** What did you think at the time?

**R. Rwaheiguru:** I thought … we all thought it was a curse from God. Something like this had never happened in our lifetime. We used to hear about the locust calamities that affected our grandparents a long time ago, but we had never seen anything like this with our own eyes.

**HOST:** What did you do after you lost the crop?

**R. Rwaheiguru:** What could I do? I prepared the land and planted sweet potatoes.

**HOST:** And yet look at the banana crop you have here now! How did you turn it around?

**R. Rwaheiguru:** Things changed after we realized our mistakes.

**HOST:** Which were?

**R. Rwaheiguru:** Not sanitizing the pangas we used to cut diseased plants. That’s how we all infected our banana crop. We have since learnt to sanitize our tools. We have also learnt that leaving the male bud on a growing bunch of matoke is another way the bacterial wilt spreads. So now we remove the male buds right after the last cluster has been exposed with a forked stick.

**HOST:** I can see that the soil in your garden is really fertile. What have you done to maintain fertility?

**R. Rwaheiguru:** We have always mulched with pruned banana leaves and dried grass from swamps. Then in the recent past, we learned about compost pits, which I have been using to increase soil fertility.

**HOST:** How does that work?

**R. Rwaheiguru:** You dig three pits right next to each other. You keep dumping all sorts of rubbish like kitchen waste, goat and chicken droppings, and so on in the first pit until it fills. When it’s full, you remove the rubbish from the first pit and dump it in the second pit. Then, I start conditioning the rubbish in the second pit to make it decompose uniformly.

**HOST:** How do you condition it?

**R. Rwaheiguru:** I apply urine so that the rubbish decomposes at a fast pace. I keep applying urine until the first pit fills again, which takes about two months.

**HOST:** So then you take the rubbish out and apply it to the plants?

**R. Rwaheiguru:** No. The rotting rubbish still produces heat and is not ready. Instead, I dump the rubbish in the third pit so that the rotting rubbish turns into organic fertilizer.

**HOST:** So when do you know that the manure is ready for application?

**R. Rwaheiguru:** When it looks like soil—black soil, and it’s not hot anymore.

**HOST:** How do you apply it?

**R. Rwaheiguru:** It’s not good to put the fertilizer right on the trees themselves. So we apply it one foot away from the side of the plant which has a budding banana stem. After pouring the manure there around the stool, we fork the soil with a rake to mix the manure with the soil and make it easy for water to penetrate. After that, good plants come up!

**HOST:** I can see your plants are fabulous. How are your yields?

**R. Rwaheiguru:** Sometimes when I am lucky, I can cut forty bunches of matoke per month.

**HOST:** And how big is your farm?

**R. Rwaheiguru:** It’s about two acres.

**HOST:** Thank you. That was Robina Rwaheiguru talking about how she has fought banana bacterial wilt and kept her soil fertile, both of which have resulted in high yields of matoke. I now need to talk to an expert about a few issues.

**SFX:**  MOTORCAR ENGINE STOPS AWAY FROM MIC

 I meet an agricultural officer, Ms. Clemence Nohamutizi, in the village of Kyamuhunga, 15 kilometres away from Robina’s home. Ms. Nohamutizi is out in the field meeting farmers and, if I want to talk to her, I have to find her in the field. Clearly she is a very busy lady. I find her finishing with a group of female farmers in a banana field. So she answers my questions right in front of the group, clearly for their benefit as well.

**HOST:** Madam Clemence, I have been talking to farmers about banana bacterial wilt. I have learnt that when the disease first appeared, farmers did their best to fight it, but in vain. Those very farmers now have very good crops today. Why did they fail at first?

**Clemence Nohamutizi:** They failed because they lost hope. They weren’t listening to advice from experts because everyone thought the disease was incurable. Most farmers were not regularly inspecting their fields in order to cut and bury sick plants in a timely fashion.

**HOST:** And what’s so bad about not cutting a sick plant?

**C. Nohamutizi:** When you leave a sick plant standing, you keep the inoculum alive. Inoculum is the seed of the bacteria. And like all seeds, as long as it doesn't die, it will germinate.

**HOST:** But farmers told me that, even though they cut sick plants, the disease kept increasing.

**C. Nohamutizi:** Like I said, they were not following our advice, at least not entirely. For instance, we told farmers that cutting sick plants was not enough if they didn't put the tools in fire or use a common disinfectant like the one called *Jik* afterwards. But not many listened.

They said that Jik was too expensive and things like that. Other farmers didn’t even cut their sick plants; some were sick and others were too old to go around wasting energy on cutting sick plants. But many were just plain lazy or stubborn. This hurt those farmers who were doing their best to kick the disease out so much that they even complained to the authorities.

**HOST:** And what did the authorities do?

**C. Nohamutizi:** They passed a bylaw stating that anyone found with a sick plant in their banana field would be fined forty thousand for each sick plant [*Editor’s note: about $11 US*]. If the offence was repeated, they would throw the farmer in jail. So people started fighting the disease with all their might.

**HOST:** Who enforced the bylaw? The police?

**C. Nohamutizi:** Everyone—neighbours, the LC1 Chairman, the LC5 Chairman —everyone from the village to the district was a law enforcer.

**HOST:** Did the disease start losing the battle at this point?

**C. Nohamutizi:** Yes. But not so easily! You know we use banana leaves for cooking almost everything. We cut banana leaves every day, one from this plant and another from another plant ... And so we were infecting new plants.

 But we have reversed these mistakes slowly by slowly. Now people sanitize their tools with Jik or flame them, and they cut sick plants and bury them in a timely fashion. That’s why the fields are looking good again.

**HOST:** Tell me about the best ways to get the maximum yield from a banana field.

**C. Nohamutizi:** The best ways are simple farming practices like keeping your soil moist by mulching and building water conservation bunds, forking around the plant so water can penetrate into the soft soil, weeding on time so that the weeds don't consume food that’s meant for the banana plants, and definitely de-leafing and de-suckering regularly.

**HOST:** What’s the best way to de-leaf and to de-sucker?

**C. Nohamutizi:** The right way to de-leaf is to remove only the yellow leaves that are broken. Do not cut the other leaves because they are still making food for the plant. But when a leaf yellows and breaks, it is tired. So you should cut it and use it as mulch.

**HOST:** How about de-suckering?

**C. Nohamutizi:** When it comes to de-suckering, you should ensure that only three or four stems are left standing in succession on each stool: one mother stem, one daughter stem, and a smaller one. These stems will then produce fruit in succession, one after the other. Any other sucker on the stool is a waste of space and will make the other bunches smaller.

**HOST:** What’s the secret behind applying ash in a banana crop? Many farmers told me they add ash, but they didn't explain the reason why.

**C. Nohamutizi:** Ash has many uses. It has potassium and phosphorus. Phosphorus helps the plant grow more roots, which means that it gathers more food. Potassium helps transport and accumulate food into banana fingers on the bunch … all this helps a farmer get bigger yields.

**HOST:** That was Ms. Clemence Nohamutizi, an agricultural officer in Bushenyi district. She has a wealth of experience when it comes to growing bananas and fighting banana bacterial wilt. According to Clemence, one can completely eliminate the disease if they work smart enough. She told me that she no longer has bacterial wilt in her farm, and that she knows a few others like her.

 Yes, the war against the disease is far from over, but clearly there are steps you can take to contain it, even eliminate it, and have a healthy crop. So keep searching for knowledge from people like Clemence and keep applying it—because there is hope.

 (PAUSE) Today, we’ve not only heard about ways to fight bacterial wilt and the mistakes to avoid, but we have also talked about ways to increase your banana yield by using simple farming techniques like mulching, composting, and de-leafing and de-suckering in the right way.

 Remember to tune in to the program next week, when our topic will be \_\_\_. Goodbye for now from me, \_\_\_.

## Acknowledgements

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**Sources of information**

Interviews:

Moreen Mwesigwa

Robina Rwaheiguru

Clemence Nohamutizi

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